

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. – 22. (Canceled)

23. (New) A method of controlling paging flow in a network for cellular communications, comprising the steps of

at a control node, receiving a request for paging a mobile station;

determining a location area in which the paging shall be performed;

checking whether the number of paging transactions which are ongoing for the location area is lower than at least one maximum number of ongoing paging transactions allowed for the location area; and

after a determination that the number of ongoing paging transactions is lower than the maximum number, updating the number of ongoing paging transactions for the location area and processing the paging request.

24. (New) The method of claim 23, further comprising the step of after a determination that the number of ongoing paging transactions is higher than or equal to the maximum number, checking whether the paging request derives from a Location Services request.

25. (New) The method of claim 24, further comprising the step of checking whether the Location Services request is a request for last known location of the mobile station.

26. (New) The method of claim 25, further comprising the step of checking whether the Location Service request comes from an Emergency Center or a Law Enforcement Agency.

27. (New) The method of claim 26, further comprising the step of, after a determination that the Location Services request comes from an Emergency Center or a Law Enforcement Agency, serving the paging request with priority.

28. (New) The method of claim 25, further comprising the step of retrieving information on the last known location from a Visitor Location Register.

29. (New) The method according to claim 23, wherein the updating step further comprises the step of incrementing at least one counter indicative of the number of ongoing transactions which is comprised in the control node when a paging request is accepted for processing by the control node, and the step of decrementing the counter when a paging response has been returned by the mobile station.

30. (New) The method of claim 23, wherein the paging transactions are of at least one kind selected from the group consisting of Call Control transactions, Supplementary Services transactions, Short Message Service transactions and Location Services transactions.

31. (New) The method of claim 30, wherein a respective maximum number which is allowed for the location area is defined for paging transactions of each of the kind comprising Call Control transactions, Supplementary Services transactions, Short Message Service transactions and Location Services transactions, respectively, the checking step being performed for each kind of transaction.

32. (New) The method of claim 23, wherein the control node is a Mobile services Switching Center or a serving General Packet Radio Services support node.

33. (New) A telecommunications system for controlling a paging flow in a network for cellular communications having at least one control node associated with a location area serving a mobile station to be paged, the control node having means for receiving paging requests, the system comprising:

memory means for storing at least one maximum number of ongoing paging transactions allowed for the location area and for storing the number of ongoing paging transactions;

comparing means for checking whether the number of ongoing paging transactions is lower than the at least one maximum number; and

paging means for paging the mobile station in response to an outcome of the comparing means.

34. (New) The telecommunications system of claim 33, further comprising a Location Services Request determining means for determining whether a paging request received by the control node derives from a Location Services request.

35. (New) The telecommunications system of claim 34, wherein the Location Services Request determining means are set so as to check whether the Location Services request is a request for last known location of the mobile station.

36. (New) The telecommunications system of claim 34, wherein the Location Services Request determining means are set so as to check whether the Location Services request comes from an Emergency Center or a Law Enforcement Agency.

37. (New) The telecommunications system of claim 36, wherein the control nodes comprises buffer means for temporarily storing the paging request if the Location request is a request coming from an Emergency Center or from a Law Enforcement Agency, the paging means being set so as to serve the paging request with priority.

38. (New) The telecommunications system of claim 33, wherein the control node comprises at least one counter indicative of the number of ongoing transactions,

the counter being incremented when a paging request is accepted for processing by the control node and being decremented when a paging response has been returned by the mobile station.

39. (New) The telecommunications system of claim 33, wherein the memory means comprise stored therein respective maximum numbers indicative of the maximum number of allowed ongoing paging Call Control transactions, Supplementary Services transactions, Short Message Service transactions and Location Service transactions, respectively, the comparing means being set so as the checking is performed for each of the Call Control transactions, Supplementary Services transactions, Short Message Service transactions and Location Service transactions, respectively.

40. (New) The telecommunications system of claim 33, wherein the memory means are comprised in any one of the Mobile Services Switching Center, a Visitor Location Register connected to the Mobile Services Switching Center, a Base Station Controller connected to the Mobile Services Switching Center and serving the location area.

41. (New) The telecommunications system of claim 33 wherein the comparing means are comprised in the control node.

42. (New) The telecommunications system of claim 33 wherein the paging means further comprises a Mobile Services Switching Center and a Base Station Controller serving the location area.

43. (New) The telecommunications system of claim 33, wherein the number of ongoing paging transactions is the overall number of ongoing transactions, regardless of the kind of transaction.

44. (New) The telecommunications system of claim 33, wherein the control node is a mobile services switching center or a serving general packet radio services support node.